Tiny cracks in planes call safety procedures into question

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FORT WORTH, Texas — For nervous travelers, the phrase sounds terrifying: Cracks discovered in an aircraft's fuselage.

It evokes images of holes ripped in the sides of airplanes, explosive decompression of passenger cabins and catastrophic crashes. The frightening connotations have become a serious issue for Southwest Airlines, which has been accused by the Federal Aviation Administration of allowing passengers to fly on Boeing 737 airplanes that hadn't been properly inspected for cracks.

But were passengers ever really in danger on Southwest planes?

Absolutely not, Southwest executives and Boeing say. They say that the cracks discovered on planes weren't large enough to pose a problem and that cracks routinely develop on airplanes over time.

Some aviation experts agree. "They're nitpicking over how well Southwest followed the rules, which is probably a good thing," said George Bibel, a professor of mechanical engineering at the University of North Dakota who has extensively studied airplane crashes. "But I don't think there was ever much danger to passengers."

Others, including the FAA, say allowing planes to fly without inspections was a significant safety risk regardless of whether serious problems were found later.

"There was a total breakdown in the system," said Jim Ballough, director of the FAA's flight standards service.

On March 6, the FAA proposed a $10.2 million fine against Southwest for failing to ground 46 jets that hadn't been inspected for exterior cracks.

The case stems from the airline's notification of the FAA on March 15, 2007, that it had discovered that the planes hadn't been inspected. The checks were overdue by 30 months.

Under FAA rules, the planes should have been grounded. Southwest also could have asked the agency to consider a waiver to keep the jets flying until they were inspected.

No waiver was requested, but the planes continued to fly for up to 10 days before being inspected. Documents indicate that a Southwest employee and an FAA official falsified a report that suggested that the planes had been grounded.

When the planes were finally examined, cracks were found and repaired on six planes.

On Tuesday, Southwest suspended three employees involved in the incident and begin reviewing inspection records. One day later, the carrier took 38 planes out of service to reinspect them for fuselage cracks because of confusion over the type of inspection that was needed. The checks turned up cracks on four of those jets.

The House Transportation and Infrastructure Committee is investigating and will hold a hearing April 3.

Fuselage cracks can develop because of the repeated pressurization and decompression of airplane cabins. The metal is designed to bend as the cabin swells slightly each time the air is pressurized.

Over time, small cracks appear along certain pressure points of an aircraft's exterior.

Fuselage cracks can be deadly if not repaired. In 1988, the exterior of an Aloha Airlines plane ruptured during a flight, and a flight attendant was sucked out of the cabin.

In 2002, a Boeing 747 flown by China Airlines broke apart in midair and crashed, killing all 225 people aboard. Metal fatigue was the culprit: A crack had developed because of an improper repair job years earlier.

Brian Alexander, a former military pilot and attorney who specializes in aviation safety for the New York firm Kreindler & Kreindler, said the lapse in inspections at Southwest was worrisome, even if serious problems weren't found once the planes were checked.

"If you dig deeper, it's clear that their system was either flawed, or they knowingly looked the other way," he said. "Either way, that's an extraordinarily important issue."